New Generation Cigarettes: Safety or Smoke Screen?

Following on the heels of the filter-tipped cigarettes of the 1950s and the low-tar and low-nicotine brands of the 1960s and 1970s, a modern round of so-called "safe" cigarettes has been making its appearance.

Philip Morris Cos. is marketing Superslims, a brand that has been available nationally since October 1989, as a "low smoke" cigarette aimed primarily at women. R. J. Reynolds Tobacco Company, a subsidiary of RJR Nabisco Inc., purports that its test product, Vantage Excel, emits less sidestream smoke than conventional cigarettes. R.J. Reynolds test-marketed this cigarette for consumer acceptance during 1989, but withdrew the product from its test markets late last year.

Smells Good?

R.J. Reynolds has been test-marketing Chelsea since April 1989, claiming it to be the "first cigarette that smells good," although it is not the first perfumed cigarette. In addition, during the summer of 1989 Philip Morris introduced a cigarette with "de-nicotined tobacco and rich flavor," called Next. This low-nicotine cigarette has test markets in three cities—Hartford, CT; Omaha, NE; and Toledo, OH.

These new products appear designed to counter heightened consumer concerns about passive smoking and nicotine addiction. However, the health claims and designs of these technologically advanced "safe" cigarettes concern the public health community.

Chelsea, Superslims, and Vantage Excel all seem to be targeted to smokers who are worried about exposing others to their smoke. Betsy Annese, staff vice president of communications for R.J. Reynolds, explained that Vantage Excel had been "designed to produce less smoke from the lit end, which can be an annoyance to some people." Annese indicated that "inadequate consumer response" prompted the company to stop test-marketing this cigarette.

PR Problem

However, John Slade, M.D., a physician at the University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School, believes "the tobacco companies are treating tobacco smoke pollution as a public relations problem, instead of a public health problem."

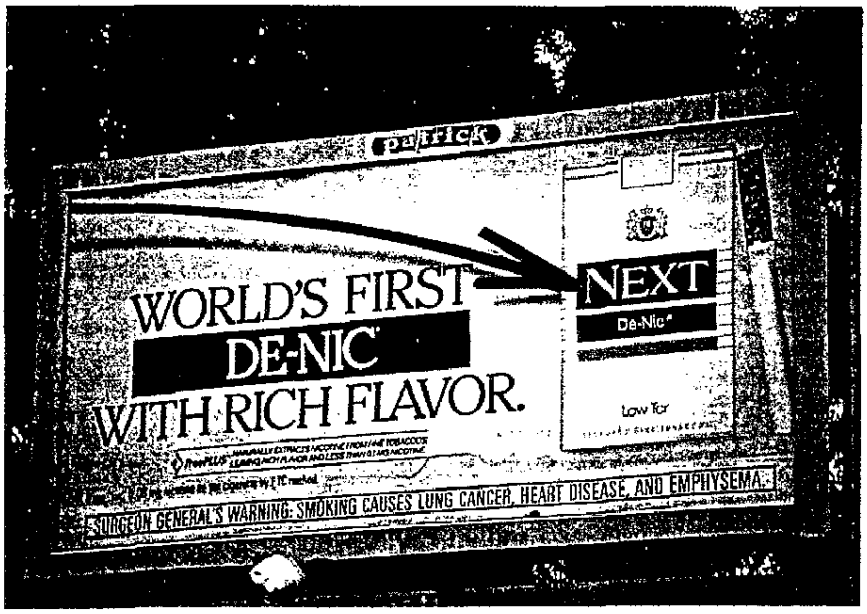
Slade said, "There is no evidence that Vantage Excel or Superslims reduces the harmful effects of tobacco smoke pollution, only its obviousness. In fact, one may argue that since the smoke is less visible, nonsmokers have less warning of the pollution hazard with Vantage Excel or Superslims than with conventional cigarettes."

"Smoking Options"

Steven Weiss, manager of media relations for Philip Morris, indicated that the company strives to "offer a wide variety of smoking options to the 55 to 60 million adults who choose to smoke, and Superslims is another cigarette option." According to Weiss, there has been a high demand for Superslims, and the product has been "enjoyed by consumers."

Chelsea contains scented chemicals to produce sidestream smoke with a "fresh aroma." Slade has contrasted the perfume added to Chelsea with the "noxious chemical added to natural gas" to alert people to its presence in the event of a leak.

Slade said, "Masking the odor in smoke that indicates 'danger' may take



Dr. John Slade

away the sensory cue that reminds nonsmokers of the hazards of breathing tobacco smoke pollution, just as removing the chemical in natural gas would allow a gas leak to go unnoticed."

Philip Morris' brand Next attempts to appeal to consumers who are concerned about nicotine addiction. Matthew Myers, J.D., staff director of the Coalition on Smoking OR Health (a tripartite coalition of the American Cancer Society, the American Lung Association, and the American Heart Association) said that "Next's claim to be 'de-nicotined' is particularly misleading."

High Tar Levels

He added, "The message may undermine the fact that, in contrast to other low-yield brands, Next contains relatively high levels of tar, the component of tobacco smoke most likely to be responsible for causing lung cancer and other smoking-related diseases." Next has a tar-to-nicotine ratio of 100:1. Other low-nicotine brands (R.J. Reynolds' Now and American Tobacco Company's Carlton) have a ratio of 10:1.

Myers emphasized that when people switch from high-yield to low-yield nicotine brands they often change their smoking behavior to maintain their usual nicotine dose. If people who switch to Next compensate for the lower levels of nicotine by smoking more cigarettes per day, taking deeper puffs, or smoking cigarettes to a shorter butt length, they may inhale significantly more tar and carbon monoxide than do smokers of most other brands.

Mislead Consumers?

Next's health claim may also lead consumers to believe erroneously that the product contains no nicotine at all. Slade suggested that "Next may be an appealing starter product. Its smoke is easily inhaled, and as a low-nicotine product, it implies a reduced risk of addiction." There is no scientific evidence that lower nicotine brands are less addictive than other types of cigarettes.

Philip Morris' Weiss declined to comment on Next and cited the company's policy to refrain from discussing products while they are being test-marketed.

The new generation "safe"cigarettes, although different in design, are conventional in concept. The pursuit of the "safe" cigarette has paralleled the growth of the public's concern over smoking since the first reports linking smoking and lung cancer were publicized in the 1950s.

Lessons from the low-tar and low-nicotine brands that became widely available in the 1970s have taught the public health community to view this concept with a high degree of scrutiny. For example, epidemiologic studies have indicated that although persons who smoke filtered low-tar and low-nicotine cigarettes have a decreased risk of developing lung cancer than those who smoke unfiltered high-tar and high-nicotine cigarettes, the risk is much higher among these smokers than among nonsmokers. In addition, there is no conclusive evidence that smoking the low-yield brands reduces the risk of developing other smoking-related diseases or decreases overall mortality.

Ronald Davis, M.D., director of the Centers for Disease Control's Office on Smoking and Health, maintained, "The greatest danger of these products lies in their ability to lull smokers into a false sense of security."

He added, "The 1986 Adult Use of Tobacco Survey showed that one-fifth of smokers believe that the cigarettes they smoke are less dangerous than other cigarettes. That gives us an idea of how great an obstacle these so-called 'safe' cigarettes may be in persuading some smokers to quit."

Regulation

Cigarettes were not included in the Federal Food, Drug, and Cosmetic Act of 1938, and conventional tobacco products are not subject to regulation by the Food and Drug Administration. However, if new cigarettes deviate significantly from conventional tobacco products, the FDA may regulate them on a case-by-case basis as nicotine delivery drugs or devices.

After review in 1987, for example, the FDA found that Favor Smokeless Cigarette, a nicotine inhaler that contained a nicotine-impregnated piece of foam but no tobacco leaf, was a "new drug" that fell under the FFDCA.

Similarly, the American Medical Association and the Coalition on Smoking OR Health filed petitions with the FDA that called R.J. Reynolds' "smokeless cigarette" Premier, introduced into test markets in October 1988, a drug. This product consisted of a charcoal-heated, nicotine-rich aluminum cham-

ber, surrounded by a small amount of reconstituted tobacco.

The petitions were still pending when R.J. Reynolds withdrew Premier from its test markets in February 1989 because of low consumer demand, and the FDA declared them moot in July 1989.

Tighter Control

On November 15, 1989, Senator Edward Kennedy (D-MA) introduced a bill that would tighten government control over tobacco products by establishing a Center for Tobacco Products within the Centers for Disease Control. According to Senator Kennedy, the center would "assume regulatory authority over tobacco products analogous to the authority exercised by the Food and Drug Administration over other products."

Two other bills to amend the FFDCA to regulate tobacco products have also been introduced in the Senate and House of Representatives. It remains to be seen whether these bills, if enacted, would affect this current trend by the tobacco industry to introduce "safe" cigarettes.

—By Karen Broder

Artificial Intelligence Solves Simpler Problems in Oncology

The mind is a terrible thing to waste—especially on simple logical tasks that a computer can be programmed to do.

Operating in part on this premise, several researchers around the world are designing computers that can emulate human intelligence in problem-solving situations. According to experts, artificial intelligence will be able to take on simple problem-solving duties in several disciplines, leaving humans more time to tackle complex problems.

In medicine, AI is earning a place, with systems like the AI Rhum now undergoing safety and efficacy testing (just as with a new drug) at the University of Utah. And AI is now trying to score in oncology.

"I believe that this technology is coming, that it is important and that it is going to revolutionize medicine just the way telephones did," said Sandra Zink, Ph.D., of the National Cancer Institute's Radiation Research Program. "We are still a long way from having the right tools, but we are getting better at it," she added.

ONCOCIN

Daniel Masys, M.D., chief of the National Library of Medicine's Lister Hill Center for Biomedical Communication, said AI will function as intellectual amplifiers for human intelligence.

"AI will work on low levels of analyses, like taking all the knowledge available about a particular disease and arriving at a proposed conclusion," he said, "but higher levels of decision making, which involve not only complicated clinical problems (science), but also sociology, psychology, and humanity, can be left to the doctors."

Stanford University's ONCOCIN—an expert system in oncology—assists physicians in managing chemotherapy patients who are on specific protocols. Equipped with the knowledge of specific doses, fractionations, and patient schedules, the computer applies a set of inference rules in the form of 'If *x* happens, then do *y*,' to reach conclusions.

"So if a white blood count or other blood chemistry value shows something alarming, the computer knows to alert the physician to the problem and

Dr. Sandra Zink